QUESTION # 3

PART # a

What are pesticide ? Explain their different types. Why persisten pesticide are more lethal for mankind.

Pesticide :-
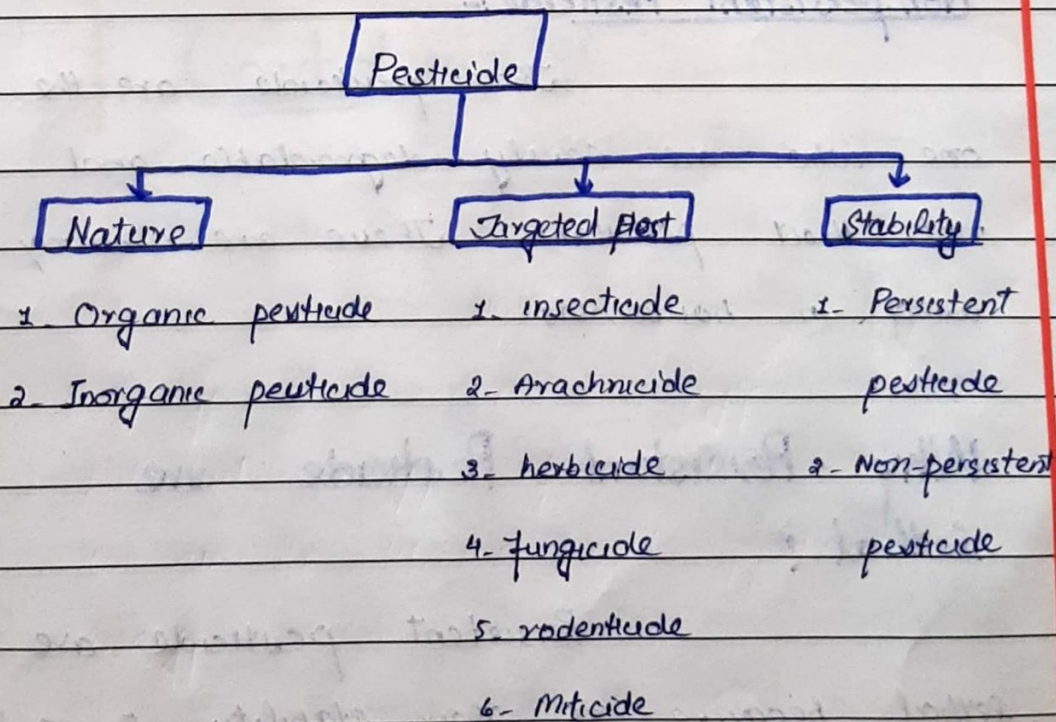
According to Environmental Protection

Agency (EPA) :

'A pesticide is any substance or mixture of substances which intende on preventing, destroying, repelling or mitigating any pest.'

Common ekep examples of pesticide are DDT, permethrin, glyphosphate.

Types of Pesticide :-

Pesticides can be classified on the bawis of their nature, targeted pests and their stability

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              ┌───────────┐
              │ Pesticide │
              └─────┬─────┘
        ┌───────────┼───────────┐
        ▼           ▼           ▼
   ┌────────┐  ┌──────────────┐ ┌───────────┐
   │ Nature │  │ Targeted Pest│ │ Stability │
   └────────┘  └──────────────┘ └───────────┘
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1. Organic pesticide   1. insecticide   1. Persistent

2. Inorganic pesticide   2. Arachnicide   pesticide

              3. herbicide   2. Non-persistent

              4. fungicide   pesticide

              5. rodenticide

              6. Miticide

Types of Pesticide on the basis of stability :-

On the basis of stability, pesticide can be classified into persistent pesticide and non-persistent pesticide.

Persistent Pesticide :-

These pesticide are the group of pesticide which are persistent and do not degrade easily and early. Usually those pesticidas are organochloride pesticide.

DDT (dichloro diphenyl tri-chloro ethane) is a common example of persistent pesticide.

Non-persistent Pesticide :-

These pesticide are the one who *which* are easily degradable and not that persistant. These are commonly used in households.

Why Persistant Pesticide are lethal ?

Persistent pesticide are lethal because of their stability. Owing to their stability, persistant pesticide

stays in the system for long and can easily enter into the food chain. There, they can increase themselves through biomagnification and became lethal to life.

Their stability and thus biomagnification makes them lethal than the non-persistant pesticides.

PART # B

What are carbohydrates? Classify and give detail of each class with examples.

Carbohydrates :

Carbohydrates are polyhydroxy aldehyde or polyhydroxy ketone. These are the biomolecules which provide 3.9 cal energy per gram. These prove immediate source of energy and store energy too. These form the structure of cell wall and cell and are much important for the biological life to exist.

Classification of Carbohydrates :-

Carbohydrates can be classified into following classes:

i. Monosacchareids
ii. Oligosacchareids
iii. Polysacchareids

Monosacchareids :-

Monosacchareids are simple carbohydrates who maintain their identity when hydrolysed and do not divide into any units. Monosacchareids are sweet in taste and are known for their being immediate source of energy.

Monosacchareids are further divided into / classified into sub-classes. Their classification is done on the basis of number of carbon present. $C_n(H_2O)_n$ is a general formula for monosacchareids. Monosacchareids form ring structure.

Example

Common example of this class are glucose ($C_6H_{12}O_6$), glactose, fructose.

Oligosacchareids :-

Oligosacchareids are those carbohydrates which give 2 to 9 monosacchareids sub-units when hydrolyzed. On the basis of the given units, oligo saccharerds can be classified into disacchareids, trisacchareids and so on. Monosacchareids combine to form oligosacchareids. These are stable and usually found in homes.

Example

Table sugar (sucrose), maltose and lactose are their known example. Sucrose, on hydrolysis, gives fructose and glucose; While, lactose gives glucose and galactose.

Polysacchareids :-

Polysacchareids are the carbohydrates which give more than 9 monosacchareids unit on hydrolysis. These are further classified into homopolysacchareids and hetero-polysacchareids. General formula for polysacchareids is $(C_6H_{10}O_5)_n$.

Example :

General examples of the polysaccareids are starch, glycogen, hypulonic acid, chondroitin, hyaluronic